

Mar. 1907. *Measurement of Plates, Astrographic Catalogue.* 363

Stellar Photography.—The Melbourne portion of the photographic catalogue and chart of the heavens has been further advanced as follows :—

	Passed as satisfactory.	Rejected.
Chart Plates with triple exposure of 30 ^m each	45	3
Catalogue Plates (duplicate series)	19	...
Test Plates on South Polar region	14	...
Test Plates on Oxford Type Charts	5	...
Plates for trials, adjustment of centre, etc.	15	...

Prolonged ill-health of the observers is partly accountable for the small progress shown by the above return.

The astrophotographic work now stands thus :—

The first series of 1149 plates, covering the entire region, -64° to the South Pole, twice, and the series of chart plates with single exposure of one hour, the centres being at even degrees of declination from -66° to -90° , were completed some time ago.

A duplicate catalogue series is now being made, and of this, 335 plates have been taken and passed as satisfactory.

In the chart series with triple exposures of 30^m each, the centres being at odd degrees of declination, 519 plates have been taken and passed as satisfactory; 65 plates require to be taken again to conclude this part of the work.

It is intended to extend the series of triple exposure chart plates to the regions with centres at even degrees of declination.

The following routine duties and other miscellaneous work were carried out for local requirements, as in former years :—

The time service; the weather service, comprising the control of some 980 country stations; the rating of chronometers for the shipping, and the testing of nautical meteorological and surveying instruments; the operations of the Bureau of Standard Weights and Measures; the continuous registration of the variations of sea-level, atmospheric elements, seismic disturbances, and the elements of terrestrial magnetism, including absolute magnetic measurements and the measurement and reduction of hourly ordinates on the magnetic curves of past years, for the purpose of clearing up, completing, and preparing for publication the results of a long series of magnetic records, extending back to the year 1868.

Joint Report of the Directors of the Observatories of Sydney and Melbourne on the Measurement of the Plates of the Astrophotographic Catalogue.

The measurement of catalogue plates obtained at these observatories was continued by the Bureau established for this purpose at the Melbourne Observatory in 1898, and since maintained at the joint expense of the States of New South Wales and Victoria.

364 *Measurement of Plates, Astrographic Catalogue.* LXVII. 5.

The work of the year 1906 was carried out by the usual temporary staff of six young ladies, assisted by a permanent officer of the Melbourne staff, using the same measuring instruments, and following in every respect the same methods as described in reports of former years.

The numbers of rectilinear co-ordinates measured during the year in the direct and reverse positions of the plates are as follows :—

149 Sydney Plates, containing 75,162 stars.

181 Melbourne Plates, containing 45,069 stars.

The total aggregate numbers of plates, etc. measured to 31st December 1906 are as follows :—

562 Sydney Plates, containing 325,978 stars.

836 Melbourne Plates, containing 268,714 stars.

ERRATUM IN ANNUAL REPORT.

On p. 298 insert the name of Prof. E. E. Barnard in list of Donors to the Library.